APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,818	01/25/2002	Yoshiki Fukui	111795	5770

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EXAMINER
BETZ, BLAKE E

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *22 February 2005*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-20* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *25 January 2002* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, filed 1/13/05, with respect to the rejection of claims 1 – 20 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 6,343,317 to Glorikian and U.S. Patent No. 6,326,918 to Stewart.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 7 and 9 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,343,317 to Glorikian.

In regard to claim 1, Glorikian discloses the following:

A service providing system for correlating service to a virtual object which is data having spatial information, relating to shape and location, constructed on a computer corresponding to a specified space, for disposing the virtual object in a virtual space associated with an actual space, and for providing service

corresponding to the specified space according to a positional relationship

between a movable mobile member and the virtual object, comprising:

- *The virtual object in a virtual space associated with an actual space* as

  disclosed by the applicant is specifically an imaginary boundary, wherein the

  presence of a mobile object within said virtual object (imaginary boundary)

  triggers a service providing system to provide service associated with said virtual

  object (imaginary boundary) to the mobile object. Column 7, lines 50 – 58 of

  Glorikian, describes the indexing of exhibits in an information database according

  to their location. "All exhibits may be documented in an information database by

  location from an arbitrary reference point, such as point 0 as shown at the upper

  left corner of site 69. This is a simple Cartesian reference system listing

  locations of exhibits in two dimensions from reference point 0. In other

  embodiments there may be a three-dimensional reference system, allowing for

  differentiation of exhibits on multiple levels of a multi-storied exhibit site, or any

  known sort of planar or spatial reference system." Thus, indexing exhibit

  information with regards to a three-dimensional reference system is equivalent to

  correlating service to data having spatial information relating to shape and

  location corresponding to a specified space. Additionally, Column 5, lines 38

  – 42, states, "In a preferred embodiment a service is provided to such as tourists

  and other travelers, wherein information of, for example, historical interest is

  stored accessible to server 13 and indexed by global position, and in some cases

  also by dynamics of global position." Column 8, lines 16 – 37, further discloses

sending information to a user depending on the user's geographic and spatial

position within the service area. Thus, providing information services to a user

with regard to their location is equivalent to *providing service corresponding*

to a specified space according to a positional relationship between a

movable mobile member and the virtual object.

a storage device that associates object information related to the spatial

information of the virtual object with service information specifying a service

content, and that stores the object information and service information;

- Glorikian discloses a database, which is specifically *a storage device,* for storing

  information about all the exhibits at a museum that may be indexed according to

  geographic location in the buildings (Column 7, lines 36 – 42).

a location-information acquisition device that obtains location information used

for identifying a location of the mobile member,

- Column 4, lines 40 – 62 of Glorikian, teaches of including a GPS device on a

  mobile unit for determining the location of the unit.

wherein, when it is determined according to the location information obtained by

the location-information acquisition device and the object information stored in

the storage device that the mobile member is disposed in an inside area of the

specified space identified by the shape and location of the virtual object, service

corresponding to the specified space is provided according to the service

information stored in the storage device.

- Column 8, lines 16 – 19 and lines 21 – 26 of Glorikian, teaches of determining the location of a user and returning information to the user relating to the various exhibits according to geographic and spatial positioning. Column 7, lines 36 – 42, states, "For the purposes of this invention, information about all of the exhibits at this museum may be indexed according to geographic location in the buildings, which may be accessed selectively if one has a portable unit requesting such information from a database while simultaneously reporting the device's relatively precise position in the museum." Therefore, providing information to a user based upon their position in the museum is equivalent to *providing service corresponding to the specified space.* Column 6, lines 63 – 67, and Column 7, lines 1 – 15, describe the various services available to a user with regard to location information. Thus, the information provided to a user is provided *according to the service information stored in the storage device.* Additionally, the service information provided by Glorikian is indexed according to positional information and accessed according to the location of the user, thus reading upon *determining according to the location information obtained by the location-information acquisition device and the object information stored in the storage device that the mobile member is disposed in an inside area of the specified space identifie3d by the shape and location of the virtual object.*

In regards to claim 2, the same basis and rationale for claim rejection as applied to claim 1 is applied. Glorikian further describes:

the mobile member and a management terminal that manages the specified space

being connected in a communication-allowed manner;

- Glorikian teaches of a server that has local access to a database for storing
  exhibit information indexed by location information, which is specifically *a*
  management terminal. Column 3, lines 25 – 30, discloses, "The service
  provided is particular to travelers, such as, for example, tourists, who are enabled
  typically with unique, hybrid hand-held units that are capable of informing server
  13 regarding specific geographic location of the units, and therefore the person
  (client) using each unit." Column 4, lines 8 – 29, further describe connecting the
  server and mobile unit via a cellular telephony network to an Internet service
  provider. Therefore, the management terminal and the mobile member are
  connected in a communication-allowed manner.

- Column 4, lines 40 – 62 of Glorikian, describes a GPS, which is specifically a
  location-information acquisition device, incorporated within the mobile unit.
  Column 4, lines 63 – 67, and Column 5, lines 1 – 11, further describe transmitting
  information from the management terminal (server) in response to requests from
  a portable unit, the request being accompanied by global positioning data
  defining the position of the unit. Thus, the mobile unit *sends the location*
  information obtained by the location-information device to the management
  terminal.

- Column 5, lines 26 – 42 of Glorikian, describes the management terminal
  (server) as having access to a storage device (databases). Additionally, lines 38

– 42 state, "In a preferred embodiment a service is provided to such as tourists
and other travelers, wherein information of, for example, historical interest is
stored accessible to server 13 and indexed by global position, and in some cases
also by dynamics of global position." Column 7, lines 50 – 58, describes the
indexing of exhibits in an information database according to their location.
Column 8, lines 16 – 19 and lines 21 – 37, teaches of determining the location of
a user and returning information to the user relating to the various exhibits
according to geographic and spatial positioning. The information corresponding
to the exhibits is indexed in the database according to positional information and
accessed according to the location of the user, thus reading upon *determining,
according to the received location information and the object information
stored in the storage device, whether the mobile member is disposed in the
inside area of the specified space identified by the shape and location of
the virtual object.*

In regards to claim 3, the same basis and rationale for claim rejection as applied to
claims 1 and 2 are applied to reject the following:

*a service providing system according to claim 1, the mobile member and a
management terminal that manages the virtual object being connected in a
communication-allowed manner; the management terminal includes the storage
device, and sends the object information stored in the storage device to the
mobile member; and the mobile member includes the location-information
acquisition device, and when the mobile member receives the object information,*

the mobile member determines, according to the location information obtained by the location-information acquisition device and the received object information, whether the mobile member is disposed in the inside area of the virtual object identified by the shape and location of the virtual object.

- Glorikian discloses a mobile member and a management terminal including a storage device that manages the virtual object being connected in a communication-allowed manner as applied to claims 1 and 2 above. Column 9, lines 59 – 67, and Column 10, lines 1 – 8, teach of sending portions of the database to the user in instances where Internet access may not be readily available on a continuing basis. Lines 3 – 10 of Column 10 state, "The client, having the relevant information stored locally, such as on a flash card, floppy disk, or hard disk drive, may then operate in the specific area, accessing the locally-stored information by real-time GPS position, just as in the Internet-connected situation described above." Thus, *the management terminal sends the object information stored in the storage device to the mobile member* while *the mobile member includes the location-information acquisition device.* The mobile member further accesses the stored information with regard to the user's position as described above with claims 1 and 2. Therefore, *the mobile member determines, according to the location information obtained by the location-information acquisition device and the received object information, whether the mobile member is disposed in the inside area of the virtual object identified by the shape and location of the virtual object.*

In regards to claim 4, the same basis and rationale for claim rejection as applied to claims 1 – 3 are applied to reject the following:

A service providing system according to claim 2, wherein, when the result of the determination indicates that the mobile member is disposed in the inside area of the virtual object identified by the shape and location of the virtual object, the management terminal provides service corresponding to the virtual object based on the service information stored in the storage device.

- Glorikian, as applied to claims 1 – 3, teaches of sending service information corresponding to exhibits according to the position of a user. By indexing the exhibit information with regard to the exhibit's location and sending data to a user with respect to the user's position, Glorikian further teaches of *when the result of determining that the mobile member is disposed inside the area of a virtual object identified by the shape and location of the virtual object, the management terminal provides service corresponding to the virtual object based on the service information stored in the storage device.*

In regards to claim 5, the same basis and rationale for claim rejection as applied to claims 1 – 3 are applied. Thus, as described in the rejection of claim 3, Glorikian discloses *sending the service information stored in the storage device to the mobile member in advance and when the result of the determination indicates that the mobile member is disposed in the inside area of the specified space, the mobile member provides service corresponding to the specified space based on the received service information.*

In regards to claim 6, the same basis and rationale for claim rejection as applied to claims 1 and 2 are applied.

- Column 8, lines 35 – 38 of Glorikian, states, "In this alternative embodiment, the database for the exhibit may be maintained and updated by the host of server 13 with input from the host of the exhibit facility." Thus, the object information in the management terminal (server) may be updated with input from the host of the exhibit facility. It is inherent in the invention of Glorikian that an input device that performs *an input related to at least one of generation, deletion, and update of the object information* must be present with regard to the management terminal (server) in order to receive the input from the host of the exhibit facility. Furthermore, it is inherent in the invention of Glorikian that the management terminal (server) comprises an object-information processing device that generates, deletes, or updates the object information according to the content of the input performed by the input device so that the input from the host of the exhibit facility will update and maintain the database for the exhibit.

In regards to claim 7, the same basis and rationale for claim rejection as applied to claims 1 is applied.

- Column 8, lines 58 – 61 of Glorikian, teaches of pushing information from the server database to the mobile unit of the user, wherein the information may be rendered as speech and announced to the user. Therefore, *the service information may be operation information specifying a content of an operation of the mobile member (such as rendering speech to be*

announced to the user). As described above in the rejections of claims 1 – 6,
the information corresponding to various exhibits are supplied to the user device
when the location of the user coincides with the indexed positional information of
the exhibits. Therefore, ***when it is determined that the mobile member is
disposed in the inside area of the specified space, the mobile member is
operated based on the operation information corresponding to the
specified space stored in the storage device (database).***

In regards to claim 9, the same basis and rationale for claim rejection as applied to
claims 1 – 7 are applied.

- Column 5, lines 38 – 41, Column 6, lines 63 – 67, and Column 7, lines 1 – 15,
  teach of supplying a user with ***a wide variety of service information related to
  at least one of a notice and guidance information related to a guidance.***
  Furthermore, Column 10, lines 10 – 62, and Column 11, lines 7 – 28, describe
  supplying a user with advertisements and other travel information with regard to
  the positional information of the user. As described in the claim rejections above,
  the system of Glorikian supplies service information to a user ***when it is
  determined that the user is positioned in a location corresponding to an
  exhibit or other service.***

In regards to claim 10, the same basis and rationale for claim rejection as applied to
claims 1 is applied.

- Column 3, lines 25 – 30 and 54 – 63, describe the mobile member as being a
  hand-held unit. Column 4, lines 1 – 7, further describe that the mobile member

may also be a portable laptop computer. Therefore, *the mobile member of Glorikian is a portable terminal.*

In regards to claim 11, the same basis and rationale for claim rejection as applied to claims 1 – 10 are applied.

- Determining the location of the mobile unit and sending the corresponding indexed service information to the mobile unit in response to the mobile unit's location in Glorikian is *providing service corresponding to the specified space based on a positional relationship between a movable mobile member and the specified space.* Column 8, lines 27 – 37, further describes providing the user with service information according to a predetermined condition according to the positional relationship between the mobile member and the specified space. Lines 29 – 34 state, "For example, the fact of a user traversing from one room to another may elicit information pertaining to the nature of exhibits in the room being approached, while the fact of a user stopping for a predetermined time before a specific exhibit may elicit information about that specific exhibit, and so forth." Thus, the mobile member is operated *based on the operation information (such as rendering speech to be announced to the user) when the positional relationship between the mobile member and the specified space satisfies a predetermined condition.*

In regards to claim 12, the same basis and rationale for claim rejection as applied to claims 6 and 11 are applied.

In regards to claim 13, the same basis and rationale for claim rejection as applied to claim 2 are applied. Column 3, lines 25 – 30 and 54 – 67, and Column 4, lines 1 – 7, of Glorikian teach of a terminal connected to the mobile member used to perform the functions of the service providing system according to claim 2.

In regards to claim 14, the same basis and rationale for claim rejection as applied to claims 1 – 3 are applied.

In regards to claim 15, the same basis and rationale for claim rejection as applied to claim 1 is applied. Column 5, lines 12 – 17, and Column 6, lines 15 – 17, of Glorikian teach of software running on the mobile terminal unit and the server for performing the functions of the invention. Thus, Glorikian additionally discloses *a service providing program.*

In regards to claim 16, the same basis and rationale for claim rejection as applied to claims 7, 11, and 15 are applied.

In regards to claim 17, the same basis and rationale for claim rejection as applied to claims 12 and 16 are applied.

In regards to claim 18, the same basis and rationale for claim rejection as applied to claim 15 is applied.

In regards to claim 19, the same basis and rationale for claim rejection as applied to claim 16 is applied.

In regards to claim 20, the same basis and rationale for claim rejection as applied to claim 17 is applied.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 6,343,317 to Glorikian in view of U.S. Patent No. 6,326,918 to Stewart.

In regard to claim 8, the same basis and rationale for claim rejection as applied to

claim 1 is applied. Glorikian discloses providing a wide variety of information to a user

based on positional information of an exhibit and the user's location. Column 6, line 63,

through Column 7, line 15, describes a plethora of services that may be provided to the

user from the management terminal (server). Column 8, lines 58 – 61, further describes

sending information that may be rendered as speech and announced to the user, while

Columns 10 and 11 describe providing the user information regarding advertisements

and other service information. However, although it is well known to transmit video data

over a network from a central server to a mobile device for providing information to a

user, Glorikian does not explicitly teach of providing information to the user in the form

of characters, images, or video. The system of Stewart discloses a method and apparatus for providing service information to a mobile unit based on the proximity of the device to a service access point (Column 2, lines 56 – 65). Stewart discloses that *the service information specifying a content of service in which media information related to at least one of characters, images, and video is provided for the mobile member* (Column 4, lines 13 – 15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Glorikian to include providing service information comprising at least one of characters, images, and video to the user as in Stewart. One would have been motivated to make such a modification to Glorikian so that video information describing the exhibition in a museum can be provided on the display (element 65 of Figure 1) of the user's mobile device. By allowing both speech rendering and video display to a user, the system of Glorikian may be made more accessible to handicapped users such as blind users who may use the audio information or deaf users who must use the video information to access data for an exhibit. In addition, all references are directed to providing information on a mobile unit/device over a wireless network interface.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 5,892,454 to Schipper et al.

GB Patent No. 2,352,588 to Hugh Symons Group plc

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blake E. Betz whose telephone number is (571) 272-7655. The examiner can normally be reached on 7:30 - 4:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BB   6/15/05

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